

The mathematics program presents concepts that are introduced, developed or mastered throughout the elementary school years. Repetition throughout the year is needed to reinforce and build upon previously learned concepts. Problem solving is incorporated throughout the school year through each topic area.

Manchester School District

A Parent's Guide to Elementary School Mathematics Curriculum

Things you can do at Home to Support your Student

Parental Support

- Promote school attendance
- Support student responsibility
- Encourage mathematic awareness
- Participate in the educational process
- Communicate with the school

“Communication begins at home”



GRADE FOUR

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Elementary School Mathematics

Grade 4

Trimester 1

EM Units- 1, 2, 3, 4

Number and Operations

- Identify, recognize, order and compare numbers to 999,999
- Place value to millions
- Add and subtract whole numbers
- Identify relationships between operations (addition, subtraction, multiplication and division)
- Mental math to solve problems
- Mastery of multiplication and division facts 1 – 12
- Estimation to solve problems and determine reasonableness using whole numbers
- Identify, order and compare decimals to tenths and hundredths
- Read and write decimals to the hundredths
- Addition and subtraction of decimals to hundredths
- Number properties (odd/even, zero property for multiplication)
- Field properties (associative, commutative, and identity properties)

Geometry and Measurement

- Rays, angles, parallel lines and perpendicular lines
- Similarity concepts
- Measurement of length using both standard and metric systems
- 2-dimensional shapes

Functions and Algebra

- Identify, extend and write rules for patterns
- Use letters or symbols to represent unknown quantities
- Equivalency between two expressions

Data, Statistics and Probability

Trimester 2

EM Units- 5, 6, 7

Number and Operations

- Multiplication of 2-and 3-digit numbers by 1- and 2-digit numbers
- Divide up to 3-digit numbers (including money) by a 1-digit number
- Understanding remainders
- Divide with remainders
- Fractions: halves, thirds, fourths, fifths, sixths, eighths and tenths
- Identify, order and compare equivalent fractions
- Add and subtract simple fractions with like denominators
- Estimation to solve problems and determine reasonableness using whole numbers and fractions

Geometry and Measurement

- Classify angles (acute, right and obtuse)
- Measurement of time and temperature using both standard and metric systems
- Elapsed time to whole, half and quarter hour increments
- Interpret and give directions to plot points and find horizontal and vertical distances on a coordinate grid
- Graph ordered pairs in first quadrant

Functions and Algebra

- Formulate and evaluate simple algebraic expressions
- One-step linear equations ($c = a \times b$)

Data, Statistics and Probability

- Collect, organize, construct, interpret, analyze, draw and justify conclusions for bar, circle (pie), pictograph and line graphs, line plots and tables
- Mode, median and range

Trimester 3

EM Units- 8, 9, 10, 11, 12

Number and Operations

- Solve problems using multiple operations, factors and multiples
- Multiply decimals (money) by 1-and 2-digit numbers
- Convert simple fractions to decimals and decimals to simple fractions
- Estimation to solve problems and determine reasonableness using fractions and decimals

Geometry and Measurement

- Build and break down 2 and 3-dimensional objects
- 3-dimensional shapes
- Congruency using transformations
- Perimeter and area of polygons and irregular shapes using formulas
- Measurement of capacity, mass and weight using both standard and metric systems

Functions and Algebra

Data, Statistics and Probability

- Use counting techniques to solve ordering problems including graphs
- Describe the likelihood of events (probability), make and test predictions
- Determine if a game is fair
- Display data in for bar, circle (pie), pictograph and line graphs, line plots and tables